**Part B: Customer Churn Prediction**

Explanation Video link:- https://drive.google.com/file/d/1hRoruG3y3UmqiYv7ieUPkvkAKTHPyzDs/view?usp=sharing

* For this project first I find out which columns are empty by creating missing value function and only ‘TotalCharges’ has missing value so I replaced it with median value and then I check is there any null value present so there are no null value present. After that I visualize the distribution of count of churn using count plot.
* Then I label the non numeric column using LabelEncoder function and using for loop and then I scaled the numeric column using StandardScaler function.
* After that I build a RandonForest Model first the feature variable X contain all columns except customerID,Churn. After I split the data into training and testing phase and then I created a RandomForest model by using RandomForestClassifier() function using the training data (X\_train, y\_train).
* After that I print metrics like Accuracy, Precision, Recall and F1 Score. And Accuracy is 78.56% which is a good accuracy for our model. And Precision is 0.623 the model makes some false positive predictions. And Recall is 0.4848 and the F1 Score is 0.5456.
* After that I test our model for new data named new\_data and then I make prediction for new data and print the prediction